Listing of Claims

1. (Currently Amended) A system for providing data-triggered workflow management, comprising:

a data-triggered process definition language for generating a process definition, wherein the process definition comprises a job record specification, an activity specification, and an activity network specification, wherein the activity specification comprises schedule rules for specifying conditions under which activities are scheduled for enactment based on workflow relevant data;

a storage device for storing the workflow-relevant data; and

a data-triggered workflow engine for generating a process instance from a process definition and managing the execution of the process instance, wherein the data-triggered workflow engine processes activity attributes and the schedule rules to determine which activities are scheduled for enactment based on the workflow-relevant data and to determine a recommended order in which the scheduled activities can be enacted based on the activity specifications and a current execution state of the process instance.

2. (Original) The system of claim 1, wherein the data-triggered workflow engine re-evaluates the schedule rules when the workflow-relevant data is modified.

3. (Original) The system of claim 1, wherein the activity specification further comprises permitted rules for specifying conditions under which activities are permitted to be enacted.

4. (Original) The system of claim 1, wherein the activity specification comprises expected rules for specifying conditions under which activities are expected to be enacted.

5. (Original) The system of claim 1, wherein the activity specification comprises an input specification for listing data in a job record that an activity can read.

6. (Original) The system of claim 5, wherein the input specification further comprises at least one attribute for specifying a manner in which data for an input field is used.

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7. (Original) The system of claim 1, wherein the activity specification comprises an output specification for listing data in a job record that an activity can produce, modify or overwrite.

8. (Original) The system of claim 1, wherein the activity specification comprises a completion state specification for listing at least one type of outcome for an activity.

9. (Original) The system of claim 1, wherein the activity specification comprises a resources specification for listing at least one resource that is needed to enact an activity.

10. (Original) The system of claim 9, wherein the data-triggered workflow engine utilizes the resources specification to determine an order in which scheduled activities can be enacted.

11. (Original) The system of claim 1, wherein the activity network specification comprises activity ordering relations that are processed by the data-triggered workflow engine to determine a preferred order in which to enact scheduled activities.

12. (Original) The system of claim 1, wherein the activity specification further comprises an auto-routing specification comprising rules for specifying a data item to copy and a location associated with the activity where to send the copied data item.

13. (Original) The system of claim 12, wherein the auto-routing rules comprise one of a mandatory auto-routing rule, a preferred auto-routing rule, and both.

14. (Original) The system of claim 12, further comprising an auto-routing server for scheduling and managing movement of copied data items.

15. (Original) The system of claim 1, wherein the activity specification further comprises an archive specification for specifying data to be archived and an archive location.

16. (Original) The system of claim 15, further comprising an archive server for copying a data item and sending the copied data item to a specified archive location.

17. (Original) The system of claim 16, wherein the data-triggered workflow engine delays completion of the transaction associated with an activity until notification is received from the archive server that a copying process is complete.

18. (Original) The system of claim 1, wherein the process definition further comprises a state-based schedule rules specification for supporting both simulation of state-based scheduling and responding to unscheduled activities changes to work-flow relevant data.

19. (Original) The system of claim 18, wherein the state-based schedule rules each comprise an in-out-consistent predicate and a prefix-consistent predicate.

20. (Currently Amended) A computer-implemented method for executing a data-triggered process, comprising the steps of:
    generating a process instance from a process definition;
    determining ~~which~~ scheduled activities associated with the process instance ~~are scheduled for enactment based on~~ using activity specifications having schedule rules that specify conditions under which activities are scheduled for enactment based on workflow relevant data; and
    computing a recommended order in which the scheduled activities can be enacted based on activity specifications and a current execution state of the process instance.

21. (Original) The method of claim 20, further comprising the step of displaying a list of scheduled activities for selection by a participant of a desired scheduled activity.

22. (Original) The method of claim 20, further comprising the step of recomputing an order in which scheduled activities can be enacted, if necessary, upon a change of state of an enacted activity.

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23. (Original) The method of claim 20, further comprising the steps of:

determining if an unscheduled activity is permitted to be enacted based on activity specifications; and

enacting the unscheduled activity if it is permitted.

24. (Original) The method of claim 20, further comprising the steps of:

determining if an activity is expected to be enacted during execution of the process instance based on activity specifications; and

preparing for enactment of the activity if it is expected.

25. (Original) The method of claim 20, further comprising the step of upon finishing an enacted activity, generating a message specifying a state of completion of the activity, recording the state of completion in a job record of the activity, and reevaluating rules of subsequent activities, if necessary, based on the state of completion.

26. (Original) The method of claim 20, wherein the step of computing an order in which scheduled activities can be enacted comprises using a resources specification of a scheduled activity to determine a priority of the scheduled activity.

27. (Original) The method of claim 20, further comprising the step of automatically routing a data item associated with an activity based on activity specifications.

28. (Original) The method of claim 20, further comprising the step of automatically archiving a data item associated with an activity based on activity specifications.

29. (Previously Presented) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for executing a data-triggered process, the method steps comprising:

generating a process instance from a process definition;

determining ~~which~~ scheduled activities associated with the process instance ~~are scheduled for enactment based on~~ using activity specifications having schedule rules that specify

conditions under which activities are scheduled for enactment based on workflow relevant data; and

computing a recommended order in which the scheduled activities can be enacted based on activity specifications and a current execution state of the process instance.

30. (Original) The program storage device of claim 29, further comprising instructions for performing the step of displaying a list of scheduled activities for selection by a participant of a desired scheduled activity.

31. (Original) The program storage device of claim 29, further comprising instructions for performing the step of recomputing an order in which scheduled activities can be enacted, if necessary, upon a change of state of an enacted activity.

32. (Original) The program storage device of claim 29, further comprising instructions for performing the steps of:

determining if an unscheduled activity is permitted to be enacted based on activity specifications; and

enacting the unscheduled activity if it is permitted.

33. (Original) The program storage method of claim 29, further comprising instructions for performing the steps of:

determining if an activity is expected to be enacted during execution of the process instance based on activity specifications; and

preparing for enactment of the activity if it is expected.

34. (Original) The program storage device of claim 29, further comprising instructions for performing the steps of upon finishing an enacted activity, generating a message specifying a state of completion of the activity, recording the state of completion in a job record of the activity, and reevaluating rules of subsequent activities, if necessary, based on the state of completion.

35. (Original) The program storage device of claim 29, wherein the instructions for performing the step of computing an order in which scheduled activities can be enacted comprise instructions for utilizing a resources specification of a scheduled activity to determine a priority of the scheduled activity.

36. (Original) The program storage device of claim 29, further comprising instructions for performing the step of automatically routing a data item associated with an activity based on activity specifications.

37. (Original) The program storage device of claim 29, further comprising instructions for performing the step of automatically archiving a data item associated with an activity based on activity specifications.